

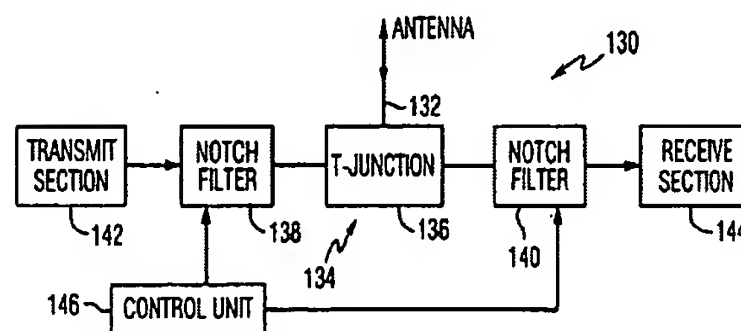
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| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|--------|---|--|------------------|---------|------------------|
| L1 | 307291 | (filter).ti. | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:06 |
| L2 | 5406 | (filter).ti. and (notch\$3 or band near3 reject\$3) | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:20 |
| L3 | 1 | 10/040,535 | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:34 |
| L6 | 163 | 2 and active with passive | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:22 |
| L7 | 255 | 2 and active and passive | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:51 |
| L8 | 7 | ("3657480" "4031321" "4589135" "4771466" "5568560" "5937072" "6405227").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:30 |
| L9 | 2 | ("5349254" "5701332").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:41 |
| L10 | 4 | ("3836726" "3890461" "5309476" "5337332").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:42 |
| L11 | 1 | ("3577179").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:43 |
| L12 | 4 | ("2584386" "3473142").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:43 |
| L13 | 4 | ("3919658" "3946328" "4015224" "4132966").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:44 |
| L14 | 58 | 7 and 327/552-559.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT ; IBM_TDB | OR | ON | 2005/06/23 09:51 |
| L15 | 3 | ("5107491" "5662118" "5717772").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:52 |

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|-----|---|---|------------------------------|----|----|------------------|
| L16 | 7 | ("3813669" "4438298" "4534024" "4608559" "4611320" "4644348" "4810949").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/06/23 09:59 |
|-----|---|---|------------------------------|----|----|------------------|

Summary of Invention
[0011] Filters for use required to provide bet made to develop new t configurations. One of 19 to add cross couplin

This invention provides a notch filter including a main transmission line, a coupling mechanism, and at least one electrically tunable resonator coupled to the transmission line through the coupling mechanism. A tunable dielectric varactor or a microelectromechanical variable capacitor is provided in each of the resonators. Wireless telephone handsets that include the filter are also included.



EAST Browser - L6 (163) 2 and active - | US 20020000875 | Tag: S | Doc: 22/163 | "Full" 1/5 (Total images 5) | Front Page

Office

DOCUMENT IDENTIFIER

TITLE: Separation of plural band pass filters

IPC Class: H03H 1/00

Abstract Paragraph - A1
The separation of a plural band pass filters, by inverting the output signals from alternate filters and not inverting the remaining output signals. All the output signals are then summed. The result is a deeper notch in the frequency response of adjacent filters.

FIG. 1

Separation of plural band pass filters

Cross Reference to Related Applications
- CITE (1):
[0004] This application is a continuation of U.S. Pat. No. 6,448,313, filed Dec. 11, 2001, assigned to the assignee of the present application. The entire content of the above application is incorporated by reference.

Summary of Invention
[0005] Frequently, a pair of adjacent band pass filters are used to filter a signal. The outputs of the filters are summed. The result is a deeper notch in the frequency response of adjacent filters.

Summary of Invention
[0006] Comb filters are relatively low, less than 20 dB, is the ratio of the band pass frequencies in a comb filter. The ratio of the band pass frequencies in a comb filter is relatively low, less than 20 dB, is the ratio of the band pass frequencies in a comb filter. The ratio of the band pass frequencies in a comb filter is relatively low, less than 20 dB, is the ratio of the band pass frequencies in a comb filter.

(19) United States
(12) Patent Application Publication (10) Pub. No.: US 2002/0000875 A1
Allen et al. (43) Pub. Date: Jan. 3, 2002

(54) SEPARATION OF PLURAL BAND PASS FILTERS (22) Filed: Jan. 13, 2000

(76) Inventors: Justin L. Allen, Mesa, AZ (US); Samuel L. Thompson, Gilbert, AZ (US) Publication Classification
(51) Int. Cl. H03B 1/00
(52) U.S. Cl. 327/557

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(57) ABSTRACT
The separation of a plural band pass filters is improved, without changing the filters, by inverting the output signals from alternate filters and not inverting the remaining output signals. All the output signals are then summed. The result is a deeper notch in the frequency response of adjacent filters.

(*) Notice: This is a publication of a continued prosecution application (CPA) filed under 37 CFR 1.53(d).

(21) Appl. No.: 09/482,293

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US-PAT-NO: 6404279

DOCUMENT IDENTIFIER

TITLE: Band pass filter with improved group delay

Abstract Text - ABTX (1)
An electrical signal is applied to a band pass filter, a first notch filter, and a second notch filter in any order. The center frequencies of the notch filters straddle the pass band of the band pass filter. The notch filters improve group delay and steepen the skirts of the response curve of the band pass filter.

TITLE - II (1)
Band pass filter with improved group delay

Brief Summary Text - B4
(1) Application No. 09/492,013

Brief Summary Text - B4
Today, a band pass filter technology. For example, capacitors, and inductor filters add one or more components becoming too attenuated, minimize a particular response, circuits are basically an samples and, therefore,

Brief Summary Text - B4
The foregoing object is achieved by applying an electrical signal to a band pass filter, a first notch filter, and a second notch filter in any order. The center frequencies of the notch filters straddle the pass band of the band pass filter. The notch filters improve group delay and steepen the skirts of the response curve of the band pass filter.

(12) United States Patent
Thomasson

(10) Patent No.: US 6,404,279 B2
(45) Date of Patent: Jun. 11, 2002

(54) BAND PASS FILTER WITH IMPROVED GROUP DELAY

(75) Inventor: Samuel L. Thomasson, Gilbert, AZ (US)

(73) Assignee: Acoustic Technologies, Inc., Mesa, AZ (US)

(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).
Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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* cited by examiner
Primary Examiner—Dich T. Le
(74) Attorney, Agent, or Firm—Paul F. Wille

(57) ABSTRACT
An electrical signal is applied to a band pass filter, a first notch filter, and a second notch filter in any order. The center frequencies of the notch filters straddle the pass band of the band pass filter. The notch filters improve group delay and steepen the skirts of the response curve of the band pass filter.

(21) Appl. No.: 09/492,013
(22) Filed: Jan. 26, 2000
(51) Int. Cl. H03K 5/00
(52) U.S. Cl. 327/357; 327/352; 327/356
(53) Field of Search 327/352, 353, 327/358, 357

9 Claims, 2 Drawing Sheets

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